THE SECRETARY OF THE INTERIOR

WASHINGTON

DEC 06 2016

The Honorable Christy Goldfuss
Managing Director
White House Council on Environmental Quality
Old Executive Office Building
Washington, DC 20006

Dear Ms. Goldfuss:

The Department of the Interior (Department) has reviewed the U.S. Army Corps of Engineers (Corps) November 2014 working final environmental impact statement (FEIS) for the proposed St. Johns Bayou and New Madrid Floodway project, a component of which is authorized under the Mississippi River and Tributaries project. The project is located in southeast Missouri.

The Corps Tentatively Selected Plan (TSP), as described in the working FEIS, would close a 1,500-foot gap in a levee along the Mississippi River isolating the Mississippi River from the last remaining tributary-floodplain complex in the state of Missouri. The project would also install pumping stations in two locations to improve drainage in the basins to intensify agricultural production. Mississippi River backwater flooding provides irreplaceable spawning, nursery, and foraging habitat for a remarkably rich and distinctive fishery, as well as habitat for tens of thousands of migrating shorebirds and waterfowl. If the New Madrid Floodway levee is closed, it would result in reduced backwater flooding of approximately 70,000 acres of floodplain habitat and as much as 53,556 acres of functional wetlands in the New Madrid basin. The Department is opposed to the levee closure in the New Madrid Floodway.

The mitigation plan described in the working FEIS involves wetland restoration on approximately 10,000 acres of agricultural land to replace the lost wetland functions. Given the tremendous scope of the impacts, the proposed mitigation plan is inadequate and infeasible, especially with regard to floodplain functions that are so important to fish reproduction. In addition, the mitigation plan proposed reforestation and wetlands restoration, much of which would be located on batture lands that would not offset the fisheries habitat losses within the New Madrid Floodway. Finding enough suitable mitigation lands from willing sellers within the project area is also unlikely because project operations will increase drainage and eliminate seasonal flooding to intensify agricultural production, significantly degrading conditions for compensatory mitigation.

The criteria for referral of a project to the Council on Environmental Quality (CEQ) include: 1) the magnitude, duration, and scope of impacts; 2) the potential availability of less damaging alternatives; and 3) and the possible violation of National environmental policies or statutes. We believe that the proposed project is unacceptable in light of these standards.

The Department and U.S. Fish and Wildlife Service (Service) have been actively involved and opposed to the project as designed since the mid-1990s, expressing significant concerns, comments, and recommendations on multiple Environmental Impact Statements (EIS) and in Fish and Wildlife Coordination Act reports. The enclosed chronology prepared by the Service and the Missouri Field Office documents the many attempts the Department has made to resolve outstanding issues at the Corps local and headquarters level. The project has been repeatedly raised to CEQ by the Department and the Environmental Protection Agency (EPA). In each instance, the Department presented unresolved concerns to the Corps, and urged the Corps to undertake EIS revisions to attempt to address outstanding issues of alternatives and impacts analysis that have remained the core of our concerns.

Most recently, the Department submitted extensive comments on the Corps 2013 Draft EIS outlining our continuing resource concerns and noted the Department may refer the project to CEQ if the Corps does not move toward a less environmentally damaging alternative. The Service also provided an April 2015 Coordination Act report and reiterated our opposition to the New Madrid portion of the TSP. Given the fundamental elements of the proposed project are only slightly modified from the alternatives in previous EISs, the Department does not anticipate the Final EIS will address our significant and outstanding resource concerns.

In summary, the Department has concluded that the New Madrid component of the Corps TSP, as described in the working FEIS, is unacceptable. Our objective throughout the coordination process has been to reach accord with the Corps on an alternative that would provide flood relief to the Town of East Prairie and the surrounding areas at lesser cost to the environment than the proposed plan. The Department has consistently recommended that the Corps pursue an alternative that avoids hydrologic alterations that would significantly degrade the critical ecologic functions provided by more than 70,000 acres of floodplain habitat and more than 53,000 acres of wetlands in the New Madrid Floodway area.

Therefore, as provided by 40 CFR, Section 1504, the Department refers this proposed action to CEQ. The details of the major reasons for this referral and our recommended course of action are discussed in the enclosed statement. We have notified the Corps of this referral through a separate letter. The Department is prepared to brief you in more detail on this issue at your earliest convenience, and available to work with CEQ, the Corps, and the Department of the Army toward resolution of this difficult issue.

Sincerely,

Sally Jewell

Sally Jewell

Enclosures

STATEMENT OF THE DEPARTMENT OF THE INTERIOR CONCERNING THE ST. JOHNS BAYOU AND NEW MADRID FLOODWAY PROJECT

Prepared for the Council on Environmental Quality

I. INTRODUCTION

The St. Johns Bayou and the New Madrid Floodway (SJNM) Project is a highly controversial and environmentally damaging U.S. Army Corps of Engineers (Corps) flood control project on the Mississippi River in southeast Missouri. The purpose of the project is to reduce flooding in the SJNM area and increase agricultural production. The SJNM area covers about 456,755 acres and is divided into two drainage basins: the St. Johns Bayou basin and the New Madrid Floodway. The New Madrid Floodway is unique in that it is the only significant portion of the historic Mississippi River floodplain in Missouri still largely connected to the river. There is a 1,500 foot gap in the Mississippi River levee at the southern end of the New Madrid Floodway that allows for up to 70,000 acres of floodplain inundation that supports nationally significant fish and wildlife resources. The project will close the levee in the New Madrid Floodway and install large pumping stations in both the New Madrid and adjacent St. Johns Bayou basins, as well as associated channel dredging.

The Department of the Interior (Department) and U.S. Fish and Wildlife Service (Service) have been actively involved and opposed to the project as designed since the mid-1990s, expressing significant concerns, comments, and recommendations on multiple Environmental Impact Statements (EIS) and in Fish and Wildlife Coordination Act Reports. From 2000 to 2014, the Corps produced numerous National Environmental Policy Act (NEPA) documents and the project has been repeatedly raised to the Council on Environmental Quality (CEQ) by the Department and the Environmental Protection Agency (EPA). Although levee closure construction began in 2006, a successful 2007 legal challenge invalidated the 2006 Revised Supplemental EIS and the project was deconstructed. The Corps then restarted the NEPA process to address the project's legal deficiencies and delivered a working final EIS (FEIS) to the agencies in January of 2014.

The Department is opposed to the levee closure in the New Madrid Floodway; however, the St. Johns Bayou basin-only alternative is a technically and economically feasible alternative that would meet the project purpose while avoiding losses to nationally significant fish and wildlife resources. If the New Madrid Floodway levee is closed, it would result in reduced backwater flooding of approximately 70,000 acres of floodplain habitat and as much as 53,556 acres of functional wetlands in the New Madrid basin. Those habitats provide essential breeding and migration areas for 193 species of migratory birds, including tens of thousands of migrating shorebirds and waterfowl. It would nearly eliminate fish access for spawning and rearing in the New Madrid Floodway during flood events, severely reducing or eliminating use of the area as spawning and nursery habitat for Mississippi River fish species. It is not possible to mitigate for the loss of floodplain spawning and nursery habitat.

Despite more than a decade of interagency coordination, independent expert review, project modifications, and a successful legal challenge, the project retains all fundamental elements of

the original informal review by CEQ in 1997. The Department continues to oppose the project because it would disconnect the last remaining major floodplain from the central Mississippi River system, essentially eliminating a unique ecological feature and resulting in the loss of tens of thousands of acres of wetlands, fish and wildlife habitat, and associated ecosystem services (Table 1). Although the project includes wetlands and fisheries mitigation, the Department believes the mitigation is infeasible and inadequate to address project impacts.

II. THE DEPARTMENT OF THE ARMY'S PREFERRED ALTERNATIVE

The Corps sent the working FEIS for the SJNM Project to resource agencies in November 2014. It was meant to address significant agency and public concerns with their draft EIS released in July 2013. As described in the working FEIS, the SJNM Project consists of a number of structural measures designed to lessen flooding in the Town of East Prairie, reduce flooding of the New Madrid Floodway from the Mississippi River, and increase agricultural production in both the St. Johns Bayou and New Madrid basins. The Corps identified Alternative A3 and B3.1 as their Tentatively Selected Plan (TSP) (i.e., preferred alternative):

- Alternative A3 is for the St. Johns Bayou and includes vegetative clearing and channel enlargement along approximately 23 miles of rural channels in the St. Johns Bayou basin. The material removed would be deposited on embankments, allowed to revegetate, and placed under a conservation easement. The alternative also includes a 1,000-cubic foot per second (cfs) pump station. Impoundment of water in the St. Johns basin would be managed between December 1 and January 31 for waterfowl management purposes.
- Alternative B3.1 is for the New Madrid Floodway and includes levee closure and the construction of four gated 10-foot by 10-foot box culverts to allow drainage through the levee closure when the river level is below the floodway level. Fourteen miles of the Setback Levee would be raised using 2.4 million cubic yards of material. This alternative also includes the construction of a 1,500-cfs pump station. Pump operations would include four periods to allow some seasonal inundation for wetlands and waterfowl management.

The Corps proposes to compensate project-related impacts to fish and wildlife resources in the St. Johns Bayou basin by: 1) constructing structures and shaping banks in St. Johns Bayou to create a stable low flow sinuous channel; 2) restoring vegetated wetlands on agricultural land; restoring vegetated wetlands on 1,816 acres; and 3) seasonally inundating 244 acres of farmland during the spring shorebird migration. Compensation for fish and wildlife impacts in the New Madrid Floodway and Mississippi River include: 1) providing a river connection to Big Oak Tree State Park via a gated culvert through the Mississippi River Frontline Levee; 2) reforesting wetlands on a minimum of 1,800 acres of farmland surrounding Big Oak Tree State Park; 3) revegetating 387 acres of wetlands; 4) revegetating 1,970 acres of wetlands below the post project 5-year floodplain; 5) removing 3,050 acres of cropland from production in the batture (i.e., unprotected land riverward of the levees) to allow the area to revegetate naturally to a bottomland hardwood or forest community; 6) restoring 432 acres of floodplain lakes (potential sites to be determined); and 7) seasonally inundating 1,286 acres of agricultural lands during spring shorebird migration period, including 993 acres of conservation lands already owned and

managed by the Missouri Department of Conservation (MDC) (Table 1). The remainder would consist of 293 acres of agricultural lands in the basin.

Table 1. Summary of impacts and proposed mitigation for the SJNM Project.

Basin	Wetland Acres Affected (FWS method)	Floodplain* Acres Affected (*10 Year Flood Event)	Proposed Mitigation (acres)
New Madrid Floodway	53,556	70,000	10,000

III. BASIS FOR THE DEPARTMENT OF THE INTERIOR REFERRAL

The Department (via the Service) has been working closely with the Corps to resolve our concerns over the last several years of project planning, and we continue to have significant concerns regarding project effects to fish and wildlife resources. In spite of our repeated concerns expressed in multiple letters, biological opinions, Fish and Wildlife Coordination Act Reports, and informal referrals to CEQ since 1996, current project plans remain only marginally revised from the original alternative. The project would result in the loss of tens of thousands of acres of wetlands and their connection to the Mississippi River that cannot be adequately mitigated as described below.

A. Disputed Material Facts

1. **The Corps Wetland Mitigation Analysis substantially underestimates the amount of wetlands impacted.** The Department believes that the proposed mitigation is inadequate to offset the environmental damage caused by the project. The inadequacies are a result of mischaracterization of existing wetland resources and trying to compensate for the lost values of as many as 53,556 acres of functional wetlands in an area a fraction of that size. The Independent External Peer Review Panel (IEPR) echoed our concerns noting the Corps wetlands methods considered only a "very small percentage" of the project area during the driest times of the year.

   The significant discrepancy between wetlands identified by the Corps and those considered to be functional wetlands by the Department is, in part, due to historic determinations of farmed and prior-converted wetlands in the project area. Many of those areas retain hydrologic characteristics of jurisdictional wetlands, yet reducing inundation of those areas is the primary project purpose. The Department believes the project will increase drainage within the project area to the extent that significant acreage of currently vegetated wetlands will no longer meet the jurisdictional definition and therefore no longer be protected under CWA from conversion to another land use. This is contrary to decades of wetlands restoration efforts nationally, especially along the Lower Mississippi River.

   The Department has consistently maintained much of the acreage in both basins can be considered functional wetlands. In 2011, an update to the National Wetland Inventory showed 53,556 acres of functional wetlands in the New Madrid Floodway. The EPA's analysis indicates that there are 59,774 acres of wetlands. However, the Corps used the Hydrogeomorphic Method (HGM) analysis to evaluate wetlands and limited the analysis

to the 5-year elevation despite Department, resource agencies, and IEPR concerns. In addition, the Corps analysis does not consider a connection with the river or recognize the full acreage and function of wetlands in agriculture. Missouri's wetlands interagency review team has chosen other tools to evaluate wetlands because HGM is cumbersome, data intensive, provides little guidance regarding tradeoffs among the modeled functions, and is almost incomprehensible to the public.

It is noteworthy to recognize that after more than a decade of project planning coordination among the resource agencies, EPA issued an environmentally insufficient rating for the most recent DEIS (2013). The EPA's comments on the 2013 DEIS note that "If implemented, the proposed project's … will cause the greatest loss of wetlands in EPA Region 7's history."

2. **The wetland mitigation proposed is inadequate to offset wetland losses.** Even though the Department believes the Corps underestimates the amount of wetlands impacted, the wetland mitigation proposed by the Corps is too low for their predicted impacts. The proposed mitigation is significantly less than if they followed the Corps 2016 "Missouri Wetland Mitigation Method" developed by an Interagency Review Team (consisting of the Corps, EPA, Service, Natural Resources Conservation Service, and MDC) to serve as the preferred method for quantifying unavoidable wetland impacts associated with the Section 404 permit applications and compensatory mitigation benefits in Missouri.

   The TSP relies primarily on restoration of forested wetlands to mitigate for lost wetlands. However it does not provide for adaptive management in the event the reforestation of bottomland hardwood tree species is not successful. For example, previous reforestation projects in the lower Mississippi River Valley have had poor success because of modified flooding regimes that drown seedlings and/or acorns. In addition, based on historic patterns in the project area and current trends, we believe the Corps assumptions overestimate future forest wetland habitat. The Department has consistently maintained throughout project planning that forested wetlands no longer subject to flooding will become highly vulnerable and many will likely be converted to agriculture.

   In addition, the Corps is proposing to credit almost 1,000 acres of existing MDC (i.e., public and already protected) conservation lands as compensatory mitigation for the project. This violates not only the Clean Water Act (CWA), but also guidance and policies for water resource development projects. Furthermore, mitigation lands would be acquired only from willing sellers in and adjacent to the project area, yet hydrologic modeling indicates lands suitable for mitigation will be limited in the area once the TSP is implemented. Available mitigation land options will be further reduced as increases in agriculture and Wetlands Reserve Program (WRP) lands are realized as anticipated by the Corps.

3. **Shorebird and Waterfowl habitat will be substantially impacted.** During migration thousands of migratory shorebirds and waterfowl rely on shallow water and overflow areas to forage, replenishing critical energy supplies for the flight to northern breeding grounds. The Floodway closure and proposed pumps would eliminate 71 percent of the

spring shorebird habitat and 97 percent of the fall shorebird habitat in the Floodway. The TSP assumes increases in winter duck use despite significant habitat alterations and associated impacts to food resources. Additionally, the TSP would eliminate backwater flooding on thousands of acres of forested wetlands and moist soil areas during spring migration, significantly reducing habitat that provides critical protein sources particularly important to waterfowl at that time of year.

4. **Fisheries will be substantially impacted, and the impacts cannot be mitigated.** The Department believes the Corps Habitat Evaluation Procedures model significantly underestimated the fisheries' habitat value in the Floodway because the model discounts flood events above 5-year frequency. Larger events (i.e., flooding less frequently) inundate a substantially greater portion of floodplain habitat. For example, a 10-year flood event can inundate approximately 70,000 acres in the New Madrid Floodway, greatly increasing available spawning and rearing habitat, as well as primary and secondary productivity associated with those areas. Additionally, fish access is likely to be significantly impacted by both the levee closure and pumping operations. According to Corps modeling, under the TSP, rearing habitat will be reduced 66 percent in the New Madrid Floodway. The working FEIS includes an analysis of fish access through the proposed gravity gates at the levee closure using the results of a fish access study in the St. Johns Bayou basin; however, it is unknown whether such actions will ensure fisheries access to the Floodway because fish movement through structures can be confounded by high velocities, restricted openings, and head differentials. The Department has continuing concerns with these assumptions, as echoed by the 2015 IEPR panel report.

   During flood events, connected agricultural floodplains provide expansive, slack-water fish habitats that cannot be substituted by the constricted, fast-flowing main channel and adjacent batture lands. These habitats cannot be replaced by batture lands because of different hydrology, velocities, and temperatures. The IEPR panel noted that the Corps failed to support their assessment that river connectivity and the flood pulse provided little to no value to environmental resources, underscoring the Department's concerns with inadequate consideration of fish and wildlife resources.

5. **The Corps incorrectly identified the TSP as the least environmentally damaging practicable alternative.** The St. Johns Bayou basin-only alternative is far less damaging to wetlands and fish and wildlife resources because it avoids the levee closure.

B. Relationship to National Environmental Laws and Regulations

The Corps TSP does not comply with National environmental statutes and regulations (40 CFR 1504.2(a)). The NEPA and the CEQ implementing regulations direct the Corps to evaluate a reasonable range of alternatives, including alternatives recommended by respondents commenting on the draft EIS. The Corps must also evaluate alternatives not previously given serious consideration, where such evaluation is based upon new information not previously considered when drafting the EIS. Since 1998, the Department, the EPA, and other parties recommended that the Corps examine a broader range of alternatives, incorporating different combinations of structural and nonstructural alternatives. In addition, the Department presented substantive comments regarding project-related wetland, wildlife and fisheries impacts, as well

as mitigation plan deficiencies. In the numerous versions of EISs, however, the Corps did not sway from its decision to evaluate only the three alternatives presented in detail, with few substantive changes to the TSP based on the comments received.

As described above, the Department believes the St. Johns Bayou basin-only alternative is far less damaging to wetlands and fish and wildlife resources because it avoids the levee closure. Thus the Department does not believe the Corps accurately identified the TSP as the least environmentally damaging practicable alternative.

The Department believes the TSP is at odds with CEQ's March 2013 "Principles and Requirements for Federal Investments in Water Resources" guidelines for water development projects across the country, in particular:

- Healthy and Resilient Ecosystems – Federal investments in water resources should protect and restore the functions of ecosystems and mitigate any unavoidable damage.
- Floodplains – Federal investments in water resources should avoid the unwise use of floodplains and flood-prone areas and minimize adverse impacts and vulnerabilities in any case in which a floodplain/flood-prone area must be used.

In recognition of the critical functions wetlands provide to fish, wildlife, and humans, Congress has enacted legislation (i.e., Clean Water Act) to protect remaining wetlands and to reverse historic wetland losses (e.g., 1985 and 1990 Farm Bills; Emergency Wetlands Protection Act of 1986; Water Resources Development Acts of 1986, 1992, and 1996; Agriculture Credit Act of 1987; Conservation Reserve Program; Food Security Act of 1992; WRP; and Federal Agriculture Improvement and Reform Act of 1996). The Department believes that the Corps' TSP is at odds with those statutes and the Administration's policy on wetlands (Executive Order 11990) and floodplain management (Executive Order 11988), retiring flood prone and marginal agricultural lands (WRP), mitigation (Presidential Memorandum 2015), and Federal agency efforts to improve fish and wildlife resources.

The TSP is inconsistent with the national effort to address Gulf Hypoxia through improved water quality and land use in the Mississippi River basin. The TSP would further degrade water quality and enable intensified agriculture in the basin by substantially reducing flooding of functional wetlands and severing the last floodplain complex in Missouri that remains connected to the Mississippi River.

The Corps is proposing to credit almost 1,000 acres of existing MDC conservation lands as compensatory mitigation for the project. This violates regulations, policies, and guidance that implement the CWA and water resource development projects.

C. The Department Finds the Corps TSP Environmentally Unacceptable

The Department opposes the New Madrid Floodway component of the TSP because:

1. As proposed, the New Madrid project features (Alternative B3.1) would cause substantial and irretrievable losses of nationally significant fish and wildlife resources.

a. The Department believes the environmental impacts (e.g., loss of acres of wetlands, fish and wildlife habitat, and ecosystem services) of the project have not been adequately characterized.
b. The mitigation plan for the project does not adequately replace the lost ecological functions of wetlands and floodplains within the project area, nor are assurances in place to ensure effectiveness of the proposed mitigation. Based on anticipated post-project hydrologic conditions, HEP results indicated that in the New Madrid Floodway indirect losses (i.e., forest clearing and conversion because of reduced flooding) of forested wetland habitat were estimated to be as much as ten times the direct losses from project construction.

2. Project-related wetlands losses are at odds with Federal conservation policy goals and sustainable water resources development.

3. The project purpose can be fulfilled by selecting only the St. Johns Bayou basin feature of the TSP (Alternative A3), which is a technically and economically feasible alternative that would meet the project purpose while avoiding losses to nationally significant fish and wildlife resources that would result from the inclusion of Alternative B3.1.

4. The Corps used a questionable economic justification for a project that would result in unmitigatable losses of nationally significant fish and wildlife aquatic resources. Of greatest concern to the IEPR panel were the deficiencies in the economic justification for the TSP. The panel noted a number of concerns regarding methods, assumptions, and rigor of the economic analyses for the TSP that made it impossible to "confirm whether the benefit-cost ratio is greater than 1." Many of these concerns centered on estimation of agricultural flood risk reduction benefits. The Corps primary criterion to select the TSP over other less damaging alternatives appears to be "excess benefits" for agricultural intensification, although it is difficult to understand what these are.

   Economic consideration of ecosystem functions must be an integral part of the cost and benefit analyses. The FEMA's recent Mitigation Policy (FP-108-024-01) explicitly includes quantified ecosystem services in their benefit to cost analyses for acquisition of properties as part of its Pre-Disaster and Flood Mitigation programs, as well as the Hazard Mitigation Grant Program. While we appreciate the Corps most recent efforts to include ecosystem services in their planning, the working FEIS fails to include meaningful monetized consideration of these functions in the alternatives analyses and project benefit to cost ratio. This underscores the Department's concerns regarding underestimating project impacts (and costs), overestimating project economic benefits, and overestimating mitigation performance which leads to an uncertain, and potentially misleading, characterization of the economics of the TSP.

IV. ISSUES OF NATIONAL SIGNIFICANCE

The New Madrid Floodway component of the TSP will sever the connection between the floodplain and the Mississippi River and will eliminate flooding across tens of thousands acres. Upon receding, those flood waters produce up to 53,556 of acres of shallow, temporarily flooded

wetlands in the New Madrid Floodway. These wetlands and floodplains support significant fish and wildlife populations and ecosystem services. Impacts of the project cannot be adequately offset; thus, the Department believes the Corps TSP will result in the unprecedented loss of nationally significant fish and wildlife resources and ecosystem services, contributing to the ongoing degradation of the lower Mississippi River ecosystem.

V. STEPS TAKEN BY THE DEPARTMENT TO RESOLVE DIFFERENCES

Since 1998, the Department has made considerable effort to resolve the issues over the environmental impacts of this project. The Department repeatedly submitted formal NEPA comments on numerous draft and final versions of the EIS urging the Corps to examine less damaging project alternatives, highlighting the shortcomings of the analyses of fish and wildlife impacts, and recommending appropriate mitigation measures in the EIS (see attached Chronology). In addition to numerous letters and phone calls, the Service, in coordination with the EPA, the Corps, the Department of the Army, and the Office of Management and Budget, has participated in several informal meetings with CEQ to discuss the project. In each instance, the Service presented unresolved issues to the Corps and urged the Corps to reformulate the project and prepare a revised EIS to resolve the significant outstanding issues of alternatives and impacts analysis that have remained the core of our concerns. The Department has repeatedly stated its support for appropriate flood control measures and continues to support reasonable measures to reduce flooding to East Prairie.

VI. DEPARTMENT'S RECOMMENDATIONS FOR FUTURE ACTION

The Department has concluded that the TSP, as described in the working FEIS, is environmentally unacceptable. The New Madrid Floodway component of the TSP will result in large-scale hydrological alterations that would significantly degrade the critical ecological functions provided by more than 70,000 acres of floodplain and 53,000 acres of wetlands in the project area, including those functions that support wildlife and fisheries resources. Our objective throughout the coordination process for this project has been to reach accord with the Corps on an environmentally acceptable alternative that would provide flood reduction to East Prairie and the surrounding areas at a lesser cost to the environment than the TSP. Given that repeated NEPA efforts to review, revise, and redirect project features and associated EISs have resulted in little project reformulation, we believe continued rounds of document modification will not substantially address our concerns.

The Department believes the Corps has identified an alternative that substantially meets the project purpose while maintaining the sustainability of nationally significant fish and wildlife resources, habitats, and ecological functions. The Department recommends that the Administration direct the Corps to select only the St. Johns Bayou basin component of the TSP (Alternative A3) as a technically and economically feasible alternative to provide flood risk reduction to East Prairie, the surrounding communities, and associated public infrastructure. That alternative would also be most consistent with national conservation goals and objectives, as well as avoid unintended adverse effects to vulnerable, disadvantaged communities along the

Mississippi and Ohio Rivers. The Department recommends that the Administration direct the Corps to drop the New Madrid Floodway component from the TSP (Alternative B3.1).

Chronology of Significant Events Pertaining to the St. Johns Bayou and New Madrid Floodway Project, Mississippi and New Madrid Counties, Missouri

1928 – Birds Point-New Madrid Floodway is authorized by the Flood Control Act of 1928 as an integral feature of the Mississippi River and Tributaries project. The Floodway was completed in 1933.

1937 – Floodway is operated for the first time.

1954 - Levee closure at New Madrid is authorized in the Flood Control Act of 1954 as part of the Mississippi River and Tributaries Act (never built because of rights-of way problems).

1965 – The Flood Control Act of 1965 modified operations of the Floodway, including breaching of the fuse plugs when the river reaches 58 feet and threatens to exceed 60 feet at Cairo, IL. As a result, modified flowage easements are purchased on lands above 300 feet NGVD, in addition to the original flowage easements already purchased for natural overtopping operation of the Floodway.

1982 - Supplemental Environmental Impact Statement (SEIS) and revised feasibility report (Legislative Phase I General Design Memorandum) for the St. Johns Bayou and New Madrid Floodway project is approved. (It did not address effects of the separately authorized levee closure.)

1986 - St. Johns Bayou and New Madrid Floodway, Missouri, project is authorized by the Water Resources Development Act (WRDA) of 1986. WRDA 1986 also includes language that land purchased by the State of Missouri after January 1, 1982, for mitigation of damage to fish and wildlife within the Ten Mile Pond Mitigation Area shall be counted toward the total mitigation lands required for the project.

1988 - Internal Corps memo noting that the local project sponsors requested that Missouri Department of Conservation (MDC) lands be used towards project mitigation. MDC opposes that suggestion, as does the U.S. Fish and Wildlife Service (Service).

1996 – 1999

Town of East Prairie is designated a Rural Enterprise Community by the White House and receives a $3 million grant to aid local empowerment according to their strategic plan. WRDA 1996 includes language to allow Federal funds to be used as local cost-share on the Corps project. In June, Memphis District (Corps) is directed to reformulate a revised project within 4 months, including only the East Prairie Phase of the authorized project. In response to Service concerns about mitigation for the revised project and the levee closure (which previous St. Johns Bayou project documents did not address), the Corps indicates they are analyzing the St. Johns Bayou project as if there were a levee closure in place because that is consistent with the project authorization, thus they do not intend to mitigate impacts to fish and wildlife resources resulting from the levee closure. The Corps also states that because the project is covered by a 10-year-old EIS, National Environmental Policy Act (NEPA) analyses would be limited to an

environmental assessment (EA), if necessary. The Service informs the Memphis District that two federally-listed species that were not addressed in the original NEPA documents now occurred in the project area and the existing NEPA documentation is outdated. We express concern that levee closure-related impacts to fish, wildlife and federally-listed species have not been analyzed. The Corps acknowledges that the Fish and Wildlife Coordination Act (FWCA) report might need revision and agrees to work closely with the Service.

In November 1996, the Service faxes the Corps a list of questions/concerns about the proposed work including: the relationship between the levee closure project and the St. Johns Bayou and New Madrid Floodway project; fish and wildlife resource impact analysis; importance of backwater flooding in that area; FWCA coordination with the Service and MDC; NEPA compliance; and Endangered Species Act compliance (Biological Assessment (BA) preparation). Through additional coordination, the Service recommends that the Corps prepare a stand-alone BA rather than adding it to an EA. We note that should an EIS be needed, a BA would be required. We ask the Corps to provide effect determinations for all federally-listed species that could occur in the project area.

In the spring of 1997, discussions with CEQ and the Assistant Secretary of the Army (ASA) Civil Works focus on Departmental concerns of the environmental impacts of the project, particularly closure of the Floodway. The Corps agrees to prepare an SEIS on the proposed East Prairie Phase of the project. Despite objections from the Department, the Corps elects to move forward with 3 miles of channel cleanout in the upper St. Johns Bayou basin under separate NEPA coordination to ensure the project would continue to receive funding, avoiding potential project deauthorization. The Corps agrees to make signing of a Project Cooperation Agreement (PCA) a prerequisite to construction of a cost-shared Federal project that normally follows NEPA compliance, contingent on full NEPA compliance for the project.

The Service agrees to be a cooperating agency on the SEIS and provides extensive scoping comments and recommends the alternatives analyses include project designs affecting only the St. Johns Bayou basin (i.e., no levee closure) and a more localized project that would provide better flood control benefits to East Prairie. The Corps advises that they did not intend to consider in the SEIS any alternatives to the existing East Prairie Phase project design that go beyond modest changes in channel width and pump operations because alternatives without the levee closure and pump stations in both basins are not acceptable to project sponsors. The Corps signs the PCA later that year despite their spring commitment to wait for NEPA compliance. Initial field work on fisheries investigation and evaluation tools (i.e., HEP) occurs that summer.

In December 1997, the Service receives the Corps' BA for the project. The BA determined that the project is not likely to adversely affect the pallid sturgeon, the bald eagle, and the Interior least tern (ILT). The Service acknowledges receipt of the completed BA and the Corps' request for formal consultation and we concur with the Corps' "not likely to adversely affect" determination for the pallid sturgeon, but we do not concur with the determinations for the bald eagle and ILT.

In November 1998, the Service submits extensive comments on an internal review draft of the SEIS that note the document fails to adequately consider study-area fish and wildlife resources,

and project impacts to wetlands and fisheries. The Service notes that unless the outstanding resource issues were resolved, the Service will recommend that the Department consider elevating this project to CEQ. The Department reiterates many of the same concerns in their comments on the April 1999 draft SEIS. The Service transmits the final Biological Opinion (BO) in June 1999 that revised the draft BO in consideration of Corps comments. In July, the Service meets with EPA and the Corps to develop analyses to resolve our concerns. The Corps clarifies the project purpose (i.e., flood control), but makes clear that only the preferred alternative provides the agricultural benefits that are driving the project and is acceptable to the project sponsor.

2000 – 2006

In June, the Service transmits the FWCA report for the project, providing extensive information on significant and uniquely valuable fish and wildlife resources to be affected; the magnitude of adverse project effects; and the impossibility of effectively mitigating those effects. The Service opposes the project because of significant losses of fish and wildlife resources while there are alternatives that would be less damaging. The Corps issues a SEIS for the project in October 2000. The Department and the Environmental Protection Agency (EPA) propose to refer the project to CEQ because of adverse effects to fish, wildlife and nationally significant aquatic resources. The Corps, however, agrees to an extension to address outstanding concerns through a revised SEIS released in November 2001 in response to headquarters-level discussions between the Department, EPA, CEQ, and the Corps. While the revised SEIS includes alternative levee alignments, the Service, as a cooperating agency, continues to oppose the Corps' preferred alternative and recommends an alternative that avoids closure of the Floodway. The Department notifies the Corps in our February 2002 comments on the draft revised SEIS of our intention to elevate the project to CEQ if appropriate changes were not made to the project. The Service's June 2002 FWCA report informs the Corps the 1999 BO was still applicable as the project effects to listed species are essentially unchanged, and continues to oppose the preferred alternative.

The Missouri Department of Natural Resources (MDNR) initially denies the Section 401 certification for the project, but eventually resolves the remaining issues with Corps through modifications to the certification. Environmental Defense and other conservation groups file suit in Federal Court against the Corps because of concerns regarding NEPA and Clean Water Act violations, as well as filing in State Court over the Section 401 certification.

In June 2005, the Corps files a motion with the court to withdraw the Record of Decision (ROD), remove the case from consideration, and correct inconsistencies in the final revised SEIS regarding fisheries and wetland losses. The Service provides the Corps a March 2006 Supplemental FWCA report which identifies continued concerns with project impacts and reiterates the Agency's position of opposing the preferred alternative. The Corps issues a revised SEIS (RSEIS 2) and ROD later in 2006. While the Court case is pending, the Corps begins construction of the levee closure and acquisition of mitigation lands. The RSEIS 2 and May 2006 ROD do not change the flood damage reduction features or preferred alternative, but adjust the mitigation measures to address resource concerns. Mitigation acreage increases and mitigation would be implemented through an adaptive management (AM) approach. The

Service and MDC continue to provide technical assistance to the Corps for mitigation site management plans and monitoring protocols.

2007 – 2012

In June 2007, the Court rules the Corps was arbitrary and capricious in their effects analysis and orders the RSEIS 2 and ROD vacated and all work on the project deconstructed. Corps begins that work in 2009. The court findings are based on insufficiency of the mitigation plan, overestimating anticipated mitigation benefits and failing to analyze the full extent of environmental impacts (i.e., looking at only a portion of the habitat for fisheries).

In January 2009, the Corps convenes the resource agencies to inform them that they will begin an Independent External Peer Review process of the project in accordance with Corps 2008 policy on Peer Review of Decision Documents (part of the Corp Reform enacted in the 2007 WRDA). In August 2009, the Service, the Corps, project sponsor (levee district), resource agencies, and expert panelists meet in southeast Missouri to tour the project site and provide the panelists information on the project and answer their questions. The natural resource agencies are to be involved in all phases of the IEPR process; however, management by Battelle will ensure strict adherence to communication with panelists to reduce bias. From 2009 through 2011, the Corps conducts a series of IEPR calls and meetings on previous project NEPA documents as well as the models/tools used for project impact assessment, and best available science (both natural resource and economic). The IEPR team reviews only information that was used in past analyses and does not address issues that were not a part of previous planning and EISs. The IEPR panelists provide many significant comments during the first two review phases, identifying serious deficiencies relating to impacts and mitigation of the project on wetlands, fisheries, waterfowl, shorebirds, and river-floodplain ecology.

The Corps provides the Service and EPA with a July 2011 internal revised DEIS on the project that includes essentially the same preferred alternative the Department had opposed, and the subject of the legal challenge. The 2011 RDEIS and the May 2011 Floodway operation lead the Department to send an August 26 letter to the ASA and CEQ underscoring the urgency to resolve the outstanding resource issues regarding the project. The Department notes "over three decades of active environmental review" and urges the Corps and CEQ to lead an administration position that adequately addresses the significant environmental impacts of the project while reducing flood impacts to infrastructure in the area.

The Corps transmits an October 2011 revised biological assessment to the Service that concludes the project is not likely to adversely affect the federally-listed pallid sturgeon and interior least tern. Concurrently, the Corps conducts an IEPR review of the DEIS, so the Service defers responding to their October letter pending the results of the IEPR review. In a May 1, 2012, draft Supplemental FWCA report, the Service reiterates concerns regarding project impacts and includes results of a 2011 update of the National Wetland Inventory (NWI) for the St. Johns Bayou and New Madrid Floodway basins. The NWI maps indicate functional wetlands acreage similar to a 2011 EPA effort, in spite of different methodologies. The Service informs the Corps that the preferred alternative appears to be essentially the same project addressed by the 1999 Biological Opinion. The Service raises concerns regarding the limited scope of the IEPR process

if the intent is to help resolve resource controversies, and notes significant concerns from the IEPR team. The Service also identifies concerns regarding the method and application of HGM to project-related wetlands impacts. The Service continues to urge the Corps to pursue an alternative that does not include closure of the Floodway. The Service concurs with the Corps' determination for the pallid sturgeon; however, we reiterate that the project is likely to adversely affect the ILT. Should the Corps pursue their preferred alternative, they should contact the Service to discuss next steps in formal consultation.

The Corps provides the Service a June 21, 2012, request for initiation of formal consultation due to the agencies' differing views of the effects to the federally-endangered ILT. In a July 9, 2012, response to the Corps, the Service notes that the October 2011 BA did not include a complete project description, including effects to the species under consideration. We also note the Corps put the project on hold during development of a summer 2012 revised DEIS. Thus the Service will continue to defer action on the BA pending a project document containing the information necessary to constitute a complete initiation package.

2013- 2016

The Corps provides the Service a January 3, 2013, internal DEIS on the project for our review and comment, with an expected January 18, 2013, public release. The document is to reflect input from the IEPR reviews. The Service provides the Corps a January 18, 2013, letter, with preliminary comments on the draft and expresses continued concern regarding the apparent discrediting of previous Service input; remaining significant effects to fish and wildlife resources; and inadequate and unsupported compensatory mitigation. The Service identifies issues where the document is at odds with IEPR reviews as well. The Service continues to recommend a less damaging alternative (i.e., St. Johns Bayou only). Based on agency concerns, the Corps delays release of the DEIS, and Corps HQ forms an internal review team in coordination with EPA and the Service to address remaining concerns. The Service provides a July letter to the Corps regarding a high-level review of a RDEIS and reiterates previous concerns. In addition, the Service requests additional information to complete the FWCA report and recommends the Corps include that report in the DEIS released to the public in the next few weeks.

Based on the 2013 internal DEIS, the Service issues an April 2013 draft BO that includes Reasonable and Prudent Measures of gate and pump operations slightly modified from those in the Corps' TSP, and more closely resembling measures identified by the IEPR team as a less damaging alternative. The Corps notes that they believe the RPMs went beyond minor changes. The Service disagrees, issues a final BO in May 2013, and responds that the Corps listed the measures as technically and economically feasible, as well as meeting the project purpose and need. Thus the RPMs are not considered more than a minor adjustment within the Corps' discretion.

Based on the internal review and coordination with EPA and the Service, the Corps issues a July 2013 DEIS, and extends the comment period to the end of November. The Department (as well as EPA) submits extensive comments outlining our continuing resource concerns (i.e., wetlands and fisheries losses, inadequate and infeasible mitigation, cumulative effects, and poorly

described AM Plan). Both the Department and EPA urge the Corps to pursue a less environmentally damaging alternative, and the Department notes should the Corps move forward the TSP, we may refer the project to CEQ. EPA rates the DEIS as "EU-2," Environmentally Unsatisfactory – Insufficient Information. The Service also notes that the DEIS failed to include our May 2013 BO, thus failing to completely document Service input and project compliance with the ESA.

In response to comments on the July DEIS, the Corps initiates Phase 4 of the IEPR effort to help address outstanding resource concerns and prepare a final EIS. In coordination with the resource agencies, the Corps invites them to submit charge questions to the panel to guide Phase 4. The Service submits questions in a May 2014 letter, and reiterates concerns with compartmentalized issues rather than using a comprehensive, holistic approach to evaluate the project. We also recommended that the IEPR role is understood and note where previous discussions by the panel indicated they were to help the Corps lessen project impacts, rather than objectively evaluate the science and feasibility of the TSP. The Service notes the IEPR review, comments, and resulting recommendations should not be constrained by assumptions about what will/not be implemented.

In response to a Memorandum for the Record (MFR) for a conference call with the agencies and the IEPR panel, the Service sends the Corps a December 2014 letter correcting the MFR to better reflect discussion and agency information. The Service notes they did not support the Corps' recent redirection of the IEPR process that almost eliminated interaction between the resource agencies and the IEPR, but for a 10-minute presentation to the panel and selected written materials. By notifying the resource agencies that the agreed-upon process, as well as their comments and preparations, would not be used for an upcoming conference call, the Corps indicates a fundamental disregard for agency statutory roles and responsibilities. The Service notes the Corps' decision to proceed unilaterally through the IEPR process was contrary to the MOA signed by all resources agencies and noted in the MFR.

In November 2014, the Corps provides the agencies with a working FEIS for the project. The Corps begins a process with the agencies to review the working FEIS as well as their proposed responses to public comments on the July draft to resolve resource concerns and finalize the NEPA document. They also complete the final phase of the IEPR. The Service provides the Corps an April 2015 FWCA report on the project, reiterating significant resource concerns, including using existing conservation lands to mitigate a Federal water development project, and continued opposition to the TSP. Many of those concerns are echoed in the March IEPR final report on the project which identifies significant issues regarding project economics, alternatives, impact assessment, and mitigation.

During 2015-2016, the Corps continues to work on responses to comments and revise the EIS for public release which is repeatedly delayed. In the summer of 2016, the Corps informs the agencies they do not anticipate providing an advance revised FEIS to the resource agencies. Thus the Department and Service have not seen a revised draft, nor modifications made to the project or EIS to address our remaining concerns. In related work, most recently, Corps surveys associated with maintenance of the Farrenburg Levee along the west boundary of the St. Johns Bayou basin documented the occurrence of federally-listed Indiana and Northern long-eared bats, as well as the rare small-footed bat. This is the first documentation of listed bats in or

adjacent to the project area and only the second area in Missouri where all three bat species have been recorded. The Corps is working with the Service to address potential effects to those species.